

AMENDMENTS TO THE CLAIMS

This listing of the claims replaces all prior versions, and listings, of claims in the application:

LISTING OF CLAIMS

1. **(Currently Amended)** An apparatus for balancing a shaft of an aircraft engine comprising:

 a ~~round~~ plate defining a first group of holes axially extending therethrough, the round plate being co-axially attached to the shaft at a forward end of the shaft;

 and

 a nose cone mounted to the plate; and

 at least one standard fastener ~~for selectively engaging only the plate,~~ the at least one standard fastener engaging the plate through at least one of the holes in the first group to thereby add an asymmetric balancing weight to the plate relative to a rotational axis of the shaft.
2. **(Previously Amended)** An apparatus as claimed in claim 1 wherein the plate further comprises a mounting system independent of the first group of holes for mounting a nose cone to the plate.
3. **(Previously Amended)** An apparatus as claimed in claim 2 wherein the mounting system comprises a second group of holes axially extending through the plate for receiving mounting bolts.
4. **(Previously Amended)** An apparatus as claimed in claim 2 wherein the plate comprises a position element on a forward surface thereof for co-axially aligning the nose cone with the shaft.
5. **(Original)** An apparatus as claimed in claim 1 wherein the plate comprises a position element on a rear surface thereof for co-axially aligning the plate with the shaft.
6. **(Previously Amended)** An apparatus as claimed in claim 3 wherein the plate comprises a plurality of clinch nuts each attached to respective holes of the second group on a rear surface of the plate for engaging the respective mounting bolts.

7. **(Previously Amended)** An apparatus as claimed in claim 6 wherein the plate comprises means on its rear surface for restraining rotation of the respective clinch nuts.
8. **(Previously Amended)** An apparatus as claimed in claim 1 wherein at least one standard fastener is selected from a variety of standard screws having identical diameters but different lengths such that one of the screws with a selected length can be engaged in the at least one of the holes of the first group as the selected balance weight added to the plate.
9. **(Currently Amended)** An apparatus as claimed in claim 5 wherein the plate comprises a central aperture for receiving the shaft extending through the aperture with clearance between the shaft and the aperture, the plate being affixed to the shaft by a fan retaining nut secured to the forward end of the shaft, the plate being axially restrained between the fan retaining nut and a radial wall of a fan rotor of the aircraft engine, and the position element on the rear surface of the plate for co-axially aligning the plate with the shaft contacting an axial surface of the fan rotor.
10. **(Currently Amended)** An apparatus for an aircraft engine comprising:
 - a nose cone of the aircraft engine;
 - at least one balance weight element;
 - a member centrally mounted to a forward end of a rotatable shaft of the aircraft engine, the member including a mounting apparatus ~~by which mounting the nose cone is mounted to the member and~~ the member further including a balancing apparatus distinct from the mounting apparatus, ~~and the balancing apparatus of the member adapted to retain~~ retaining the at least one balance weight element to the member ~~asymmetrically relative to shaft rotation to thereby rotationally balance the shaft independently of the nose cone while the nose cone is mounted to the member.~~
11. **(Cancelled)**
12. **(Currently Amended)** An apparatus as claimed in ~~claim 11~~ claim 10 wherein the ~~respective at least one weight element and attachment points are~~ is configured to

- permit the at least one weight element to be attached to the member only from a forward side of the member.
13. **(Currently Amended)** An apparatus as claimed in ~~claim 11~~ claim 10 wherein the nose cone and the mounting apparatus are configured to permit the nose cone to be mounted to the member from a forward side of the member and cover the at least one balance weight element.
14. **(Currently Amended)** An apparatus as claimed in ~~claim 11~~ claim 10 wherein the member comprises a first positioning element to align the member with the shaft for the central mounting of the member to the shaft.
15. **(Currently Amended)** An apparatus as claimed in ~~claim 11~~ claim 10 wherein the member comprises a second positioning element to co-axially align the nose cone with the member.
16. **(Previously Amended)** A method of balancing a shaft of an aircraft engine, the shaft including a mounting plate for mounting a nose cone to one side of the mounting plate, the method comprising steps of:
- with the nose cone unmounted, observing a rotational imbalance of the shaft; and
- accessing the mounting plate through a front opening of a casing of the aircraft engine to install and affix at least one standard fastener in one of a plurality of axial holes of the mounting plate determined during the observation step to thereby rotationally balance the shaft.
17. **(Original)** A method as claimed in claim 16 comprising a step of selecting the at least one standard fastener from a plurality of standard fasteners having identical diameters and different lengths to provide a selected balance weight added to the plate.
18. **(Previously Amended)** A method as claimed in claim 17 further comprising a step of applying adhesive between the selected at least one standard fastener and the plate.
19. **(Original)** A method as claimed in claim 17 further comprising a step of mounting the nose cone to the mounting plate after the shaft is rotationally balanced,

a wall of the nose cone providing additional retention to the fastener received in the hole.

20. (New) The apparatus as claimed in claim 1 wherein the nose cone defines a groove configured to accommodate a section of the at least one fastener projecting from the plate.
21. (New) The apparatus as claimed in claim 10 wherein the nose cone defines a groove configured to accommodate a section of the at least one balancing weight element projecting from the member.